California Air Resources Board

Greenhouse Gas Quantification Methodology for the California Air Resources Board Low Carbon Transportation Advanced Technology Freight Demonstrations:

Multi-Source Facility Demonstration Project

Greenhouse Gas Reduction Fund Fiscal Year 2014-15

A. Introduction

The Air Resources Board (ARB) is required to develop quantification methods for agencies receiving Greenhouse Gas Reduction Fund (GGRF) appropriations per SB 862 (Senate Budget and Fiscal Review Committee, Chapter 36, statutes of 2014).

B. Quantification Methodology

ARB developed the Multi-Source Facility Demonstration Project to provide grants to implement advanced technology freight demonstrations. Each grant will demonstrate multiple types of equipment and vehicles employing zero and near zero-emission technologies at one or more freight facilities located within, or with the project directly benefitting, disadvantaged communities. Examples of multi-source facilities include: distribution centers, warehouses, ports, intermodal railyards, or other freight facilities.

The project(s) will reduce greenhouse gas (GHG) emissions and provide economic, environmental, and public health co-benefits to disadvantaged communities, while synergistically demonstrating the practicality and economic viability of wide-spread adoption of advanced freight technologies for various sources at a facility.

ARB's competitive solicitation for the Multi-Source Facility Demonstration Project includes the quantification methodology for applicants to use in estimating GHG emission reductions of proposed projects funded with fiscal year (FY) 2014-15 GGRF monies. The methodology compares GHG emission reductions between proposed projects to aid in selecting projects for funding. The quantification methodology is expected to apply to most project types, including: yard trucks, transport refrigeration units, forklifts, on-road haul trucks, and others.

The quantification methodology provides an initial estimate of the GHG emission reductions by comparing the GHG emissions associated with the base case vehicle or equipment and the advanced technology vehicle or equipment. The difference between GHG emissions from the base case and the advanced technology case provides the estimated GHG emission reductions that are associated with the advanced vehicle or equipment demonstration.

The Multi-Source Facility Demonstration Project quantification method is available here: http://www.arb.ca.gov/msprog/aqip/solicitations/msc1514appd.pdf

C. Next Steps

ARB will continue to evaluate and update the GHG emission reductions quantification methodologies as necessary for future FY GGRF appropriations. Quantification methodologies are posted on ARB's auction proceeds webpage at: http://www.arb.ca.gov/cc/capandtrade/auctionproceeds/quantification.htm